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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/756,980	01/13/2004	Joseph F. Petolino	50,518A DIV2	4550
25212	7590	07/12/2006	EXAMINER	
DOW AGROSCIENCES LLC			MEHTA, ASHWIN D	
9330 ZIONSVILLE RD			ART UNIT	
INDIANAPOLIS, IN 46268			PAPER NUMBER	

1638

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/756,980

Applicant(s)

PETOLINO ET AL.

Examiner

Ashwin Mehta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3 and 8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3 and 8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1132004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Preliminary Amendment***

1. The claim amendments of the preliminary amendment filed January 13, 2004 have been entered. However, the specification amendments have not been entered because the locations of the paragraphs that are to be amended are incorrect. Applicants should re-submit the amendment to the specification, citing the correct locations of the paragraphs to be amended.

Pending claims 3 and 8 have been examined in this Office action.

### ***Priority***

2. Applicants attempted to insert a claim of domestic priority into page 1 of the specification in the preliminary amendment filed January 13, 2004. As it is a part of the specification amendment cited above, it has not been entered. When it is re-submitted, the statement should recite the U.S. Patent No. which U.S. Application No. 10/024,070 issued as.

### ***Specification***

3. The specification fails to comply with the sequence rules of 37 CFR 1.821-1.825. Numerous nucleotide sequences appear, for example on pages 22-25, 41, 43, 44, 47-51, 53, and 54, which must be referred to by sequence identifiers. It is noted that Applicants were attempting to address this issue in the preliminary amendment discussed above. Re-submission of the amendments citing the correct locations of the amendments will obviate the objection.

***Title***

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --WHISKER-MEDIATED TRANSFORMATION OF RICE EMBRYOGENIC CALLUS AND REGENERATION OF TRANSGENIC PLANTS--.

***Abstract***

5. The abstract should be amended to recite the plant and tissue types that are encompassed by the examined and claimed invention.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation, "said plant cell aggregate is initiated on solid medium" renders the claim indefinite. Parent claim 3 indicates that the aggregate is selected from the regenerable embryogenic *Oryza sativa* callus culture. As the aggregate apparently already exists in the callus culture and is selected from it, it is unclear how it is also initiated on a solid medium.

***Claim Rejections - 35 USC § 103***

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bagnall et al. (WO 94/28148, published December 8, 1994) in combination with Ram et al. (Plant Cell Tiss. Org. Cult., 1985, Vol. 4, pages 241-248).

The claims are broadly drawn towards a method for producing a fertile transgenic *Oryza sativa* plant comprising transforming a plant cell aggregate selected from an embryogenic *O. sativa* embryogenic callus culture, identifying transformed cell lines, and regenerating fertile transgenic plants therefrom; or wherein the plant cell aggregate is initiated on solid medium.

Bagnall et al. teach a method of producing transgenic monocot plants produced by whisker-mediated transformation of cells capable of regeneration into a whole plant, including cells from embryogenic callus culture. Stably transformed lines were also derived from whisker treatment of embryogenic callus, indicating that the method can be extended to other target tissues (pages 4-6, 9, 17-33, 35, 36).

Bagnall et al. do not teach production of embryogenic *O. sativa* callus cultures.

Ram et al. teach production of *O. sativa* embryogenic callus culture on a solid medium, and regeneration of reproductively mature plants therefrom (pages 242-247). Given the indefiniteness of the limitation in claim 8 of initiating the plant cell aggregate on solid medium,

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the claim is being interpreted here as if it is the callus culture that is to be initiated on solid medium.

It would have been obvious and within the scope of one of ordinary skill in the art at the time the invention was made to use the whisker-mediated transformation method of Bagnall et al. with other monocot species, including rice. It would have been obvious to use the method to transform embryogenic callus from *O. sativa* and regenerate fertile transgenic plants, following the callus formation and plant regeneration method of Ram et al., for example. One of ordinary skill in the art would have been motivated to use the method of Bagnall with *O. sativa*, as the method taught by Bagnall et al. encompasses use with any monocot, and given the obvious worldwide agronomic importance of rice.

#### ***Contact Information***

Any inquiry concerning this or earlier communications from the Examiner should be directed to Ashwin Mehta, whose telephone number is 571-272-0803. The Examiner can normally be reached from 8:00 A.M to 5:30 P.M. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Anne Marie Grunberg, can be reached at 571-272-0975. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300. Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

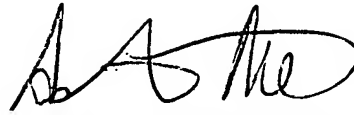
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For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

June 30, 2006

A handwritten signature in black ink, appearing to read 'Ashwin D. Mehta', with a large, stylized loop at the end.

Ashwin D. Mehta, Ph.D.  
Primary Examiner  
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